

REMARKS

Claims 1-2, 11, 18, 20, 24, 29, 39, 45, and 51 are amended, no claims are canceled, and no claims are added; as a result, claims 1-64 are now pending in this application.

No new matter has been added through the amendments to claims 1-2, 11, 18, 20, 24, 29, 39, 45, and 51. Support for the amendments to claims 1, 11, 18, 24, 29, 39, 45, and 51 is found throughout the specification, including but not limited to the specification at page 6, line 5 through page 8, line 27. Claim 2 was amended merely to delete the phrase "a particular" and to add the word "the" before the word "workpiece" in the claim. Claim 20 was amended merely to add the word "on" between the words "based" and "manufacturing."

§103 Rejection of the Claims

Claims 1-14, 17-24, 26-42, 45-51 and 53-64.

Claims 1-14, 17-24, 26-42, 45-51, and 53-64 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Monette et al. (U.S. Publication No. 2003/0102367 A1) in view of Schoop et al. (U.S. 6,671,569). Applicants respectfully traverse the rejection of claims 1-14, 17-24, 26-42, 45-51, and 53-64.

Claims 1-14, 17-24, 26-42, 45-51, and 53-64 are not obvious in view of the proposed combination of Monette et al. and Schoop et al.¹ because the proposed combination of Monette et al. and Schoop et al. fails to disclose or suggest all of the subject matter in any given one of claims 1-14, 17-24, 26-42, 45-51, and 53-64. By way of illustration, independent claim 1 includes:

determining a route a workpiece included in a lot follows during fabrication, wherein the route includes at least one operation including a plurality of subdivisions, each of the plurality of subdivisions operable to perform a substantially similar operation to the workpiece and wherein the route includes no more than one of the plurality of subdivisions;

measuring production data related to at least one manufacturing process performed during fabrication of the lot produced in the electronic device fabrication facility, wherein the production data includes at least one measurement taken directly on the workpiece included in the lot, and at least one

¹ Applicants do not admit or agree that any proposed combination of Monette et al. and Schoop et al. is possible.

measurement of conditions of the manufacturing process performed during fabrication of the lot that is not taken directly on the workpiece;

measuring facility data during the fabrication of the lot, the facility data related to the entire electronic device fabrication facility and taken from sources not directly related to the at least one manufacturing process;

storing measured data relevant to the route the workpiece followed during fabrication including the measured production data and the measured facility data taken during the fabrication of the lot in a data set of the workpiece,

analyzing the data set of the workpiece;

determining current conditions using the analysis; and

applying a process control to the route based on the analysis.

(Emphasis added).

Thus, independent claim 1 includes measuring both production data related to at least one manufacturing process performed during fabrication of the lot, wherein the production data includes at least one measurement taken directly on the workpiece, and measuring facility data during fabrication of the lot, wherein the facility data relates to the entire electronic device fabrication facility. Further, independent claim 1 includes storing both the measured production data and the measured facility data in a data set of the workpiece, analyzing the data set, determining current conditions using the analysis, and applying process controls to the route based on the analysis.

In contrast to the subject matter of independent claim 1, Monette et al. concerns using tags to program machines for printed circuit boards, and to route the printed circuit boards, wherein Monette et al. states:²

[0181] Furthermore, from the previous application, if the PCBs are tagged, the appropriate information could be available from the tag or from an accessed database in order to program the placement machine for a given part number. Once the machine is loaded with the PCB and the appropriate raw material, it programs itself to do the assembly.

[0182] Routing of Parts

² See Monette et al. at paragraphs 0181-0183.

[0183] Once the PCBs are tagged, the routing to the next process step can be automated. The PCB can route itself, depending on certain quality or process reports. For example, a decision to go to inspection, rework or the next assembly step can be taken, depending on certain results in the actual process step.

However, there is no disclosure or suggestion in Monette et al. of the measuring of both production data and facility data, of storing both the production data and the facility data in a data set of the workpiece, analyzing the data set of the workpiece, determining current conditions using the analysis, and applying a process control to the route based on the analysis, all as included in the subject matter of independent claim 1.

The addition of Schoop et al. fails to remedy these deficiencies in Monette et al. Schoop et al. concerns, "a method for monitoring a workpiece during a transportation and/or production process with at least one workpiece agent assigned to the workpiece."³

However, Schoop et al. fails to disclose or suggest the measuring of both production data and facility data, of storing the production data and the facility data in a data set of the workpiece, analyzing the data set of the workpiece, determining current conditions using the analysis, and applying a process control to the route based on the analysis, all as included in the subject matter of independent claim 1 and missing from Monette et al.

For at least the reasons stated above, the proposed combination of Monette et al. and Schoop et al. fails to disclose or suggest all of the subject matter included in independent claim 1, and so independent claim 1 is not obvious in view of the proposed combination of Monette et al. and Schoop et al.

For reasons analogous to those stated above with respect to independent claim 1, independent claims 11, 18, 24, 29, 39, 45, and 51 each include subject matter not disclosed or suggested by the proposed combination of Monette et al. and Schoop et al., and so independent claims 11, 18, 24, 29, 39, 45, and 51 are not obvious in view of the proposed combination of Monette et al. and Schoop et al.

³ See Schoop et al. at column 1, lines 7-9.

Claims 2-10, 12-14, 17, 19-23, 26-28, 30-38, 40-42, 46-50, and 53-64 depend from one of independent claims 1, 11, 18, 24, 29, 39, 45, and 51, and so include all of the subject matter included in the independent claim from which they depend, and more. For at least the reasons stated above with respect to independent claims 1, 11, 18, 24, 29, 39, 45, and 51, claims 2-10, 12-14, 17, 19-23, 26-28, 30-38, 40-42, 46-50, and 53-64 include subject matter not disclosed or suggested by the proposed combination of Monette et al. and Schoop et al. Therefore, claims 2-10, 12-14, 17, 19-23, 26-28, 30-38, 40-42, 46-50, and 53-64 are not obvious in view of the proposed combination of Monette et al. and Schoop et al.

For at least the reasons stated above, Applicants respectfully request withdrawal of the rejection, and reconsideration and allowance of claims 1-14, 17-24, 26-42, 45-51, and 53-64.

Claims 15-16, 25, 43-44 and 52.

Claims 15-16, 25, 43-44, and 52 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Monette et al. (U.S. Publication No. 2003/0102367 A1) and Schoop et al. (U.S. 6,671,569) in view of Levy (U.S. Publication No. 2002/0188417 A1). Applicants respectfully traverse the rejection of claims 15-16, 25, 43-44, and 52.

Claims 15-16, 25, 43-44, and 52 are not obvious in view of the proposed combination of Monette et al., Schoop et al., and Levy⁴ because the proposed combination of Monette et al., Schoop et al., and Levy fails to disclose or suggest all of the subject matter included in any given one of claims 15-16, 25, 43-44, and 52.

Each of claims 15-16, 25, 43-44, and 52 depends from one of independent claims 11, 24, 39, or 51, and so includes all of the subject matter included in the independent claim from which they depend, and more. Applicants believe they have established for at least the reasons stated above that any proposed combination of Monette et al. and Schoop et al. fails to disclose or suggest all of the subject matter included in independent claims 11, 24, 39, and 51, and therefore fails to disclose or suggest all of the subject matter included in claims 15-16, 25, 43-44, and 52.

Applicants' representatives fail to find, and the Final Office Action fails to point out in Levy, the subject matter included in claims 15-16, 25, 43-44, and 52 and missing from any

⁴ Applicants do not admit or agree that any proposed combination or combinations of Monette et al., Schoop et al., and Levy are possible.

proposed combination of Monette et al. and Schoop et al. Thus, the proposed combination of Monette et al., Schoop et al., and Levy fails to disclose or suggest all of the subject matter included in claims 15-16, 25, 43-44, and 52, and so claims 15-16, 25, 43-44, and 52 are not obvious in view of the proposed combination of Monette et al., Schoop et al., and Levy.

For at least the reasons stated above, Applicants respectfully request withdrawal of the rejection, and reconsideration and allowance of claims 15-16, 25, 43-44, and 52. .

Reservation of Rights

In the interest of clarity and brevity, Applicants may not have addressed every assertion made in the Final Office Action. Applicants' silence regarding any such assertion does not constitute any admission or acquiescence. Applicants reserve all rights not exercised in connection with this response, such as the right to challenge or rebut any tacit or explicit characterization of any reference or of any of the present claims, the right to challenge or rebut any asserted factual or legal basis of any of the rejections, the right to swear behind any cited reference such as provided under 37 C.F.R. § 1.131 or otherwise, or the right to assert co-ownership of any cited reference. Applicants do not admit that any of the cited references or any other references of record are relevant to the present claims, or that they constitute prior art. To the extent that any rejection or assertion is based upon the Examiner's personal knowledge, rather than any objective evidence of record as manifested by a cited prior art reference, Applicants timely object to such reliance on Official Notice, and reserve all rights to request that the Examiner provide a reference or affidavit in support of such assertion, as required by MPEP § 2144.03. Applicants reserve all rights to pursue any cancelled claims in a subsequent patent application claiming the benefit of priority of the present patent application, and to request rejoinder of any withdrawn claim, as required by MPEP § 821.04.

CONCLUSION

Applicants respectfully submit that the claims are in condition for allowance and notification to that effect is earnestly requested. The Examiner is invited to telephone Applicants' attorney (612) 349-9587 to facilitate prosecution of this application.

If necessary, please charge any additional fees or credit overpayment to Deposit Account No. 19-0743.

Respectfully submitted,

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CERTIFICATE UNDER 37 CFR 1.8: The undersigned hereby certifies that this correspondence is being filed using the USPTO's electronic filing system EFS-Web, and is addressed to: Mail Stop RCE, Commissioner of Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on this 21st day of November 2007.

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